MICHIGAN FARMER.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC ECONOMY.

Volume III. Jackson, April, 1845. Number 1.

PUBLISHED MONTHLY,

BY H. HURLBUT,

EDITOR AND PROPRIETOR.

FIFTY CENTS A YEAR:

Five copies for Two Dollars—payable in advance.

This number has been unexpectedly delayed on account of a disappointment in the receipt of type.

To Subscribers.

☞By the provisions of the new Post Office law, which goes into effect on the first of July next, the postage on pamphlets is regulated by weight, being two and a half cents for the first, and one cent for each additional ounce. This would make the annual charge for postage on this publication, if made in pamphlet form as heretofore designed, about sixty-six cents a year; whereas, if issued in a single sheet like the present, it will be subject only to newspaper rates; which are, within 30 miles, free; over 30, the same as heretofore. This material difference in the cost to our subscribers, leads us to think the present form would be preferred; and we shall therefore relinquish our own preference, and continue the issue of a sheet like the present.

The pamphlet form being for these reasons relinquished, we have thought we should still further consult the wishes of our subscribers, if, in view of the increasing hardness of the times, and other considerations, we make the issue of our sheet monthly instead of semi-monthly, at half the former price. This will throw the paper within the reach of all, and its introduction to more general circulation, will, we think, make it quite as useful to the farming community at large, as heretofore. Its pages will henceforth be more strictly confined to matters appropriate to its title, so that the amount of agricultural matter furnished monthly to our readers will not be much less than formerly. And within this space we shall endeavor to furnish in a condensed form, together with such valuable communications as may be received from practical and scientific farmers of our own state, the most important facts which may be gathered from the various agricultural journals of the country.

In making this change, we have consulted not our own inclinations, but what we think would be the choice of the majority of our patrons, and most conducive to the interests of agriculture in our state. We hope it will meet with general approbation.

Our terms will be for single subscribers, 50 cents per annum. Two dollars, in advance, remitted by a post master, or post paid, will obtain five copies.

All who have paid in advance at the former rates will, at their option, be credited with two years subscription, or have their money refunded.

For the Michigan Farmer.

Culture of Indian Corn.

RAISIN, 3d. Mo. (March) 11, 1845.

FRIEND HURLBUT—I have long been so thoroughly convinced of the great and varied advantages that would accrue to the farming community by reducing the size of our farms to the standard of our means to cultivate them in a much more perfect manner than we do at present, that I like, whenever fitting opportunity occurs, to cast in my mite toward spreading the sentiment that there is both more profit and more satisfaction in obtaining as great an amount of produce from one, as from two or three acres of land, or from fifty as from a hundred; and that this can be done I think there are but few men of observation and intelligence that will deny. The fact has been repeatedly proved by ocular demonstration to the farmers of this section of the country by the experiments of our aged and much respected friend Darius Comstock, an account of some of which I have heretofore given to the public, (see 1st and 9th No's. of the "Western Farmer") and in order that the readers of the "Michigan Farmer" may see that good management will produce the same result year after year, I forward an account of his success in raising corn last season, giving the substance of his own statements in relation to the experiment, which he says was made with great care to be certain of the true result.

He planted the different kinds of corn in a field of several acres of a light sandy soil, and all subject to the same mode of treatment. The land had been seeded to Clover and Timothy, and mowed the three preceding years.

About the middle of the fifth Mo. (May) it was turned under with a deep furrow, having previously had about 20 loads of coarse barn yard manure to the acre. After plowing, about ten loads more to the acre were spread on, and harrowed in, (of the latter dressing part was chip manure.) The planting was finished on the 21st of the month. It was all planted in rows 40 inches apart, with the hills 20 inches apart in the rows. Of the large dent corn two stalks were allowed to grow in a hill;—of mixed dent, red blaze &c., three stalks; and if eight rowed yellow, three stalks. The cultivator was passed through it one way three times, and it was three times howed. D. C. thinks that in a common season twice would have done as well. The produce was carefully measured and weighed. Of the eight rowed yellow corn he had ninety-six bushels to the acre—of the mixed dent, red blaze, &c. one hundred and two bushels to the acre—and of the large dent, one hundred and thirteen and 3-10 bushels (113 3-10) of 56 lbs to the bushel to the acre. He thinks that the crop might have been increased one fourth by allowing one more stalk in the hill. I leave every man to make his own comments on the above facts—many of the readers of the "Farmer" are acquainted with Darius Comstock; such know that his character for veracity is above suspicion.

JOSEPH GIBBONS.

P. S. I notice with satisfaction the account in the last "Farmer" relative to seeds received from the Patent Office. Through the kindness of one of our members of Congress, I received last season a small package of seeds from Washington among which were the Etrurian winter wheat, Tuscany winter wheat, White blue stem and White flint winter wheat. The kinds are now all now growing in my garden, and I hope will do well. There were also a few Water-melon seeds of several "improved varieties," I distributed all but two or three seeds of each kind, which produced excellent melons last season. Some of the seeds of this produce are still on hand, and will be freely furnished to *any reader of the "Michigan Farmer"* who may apply for them. J. GIBBONS.

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We like exceedingly such plain practical articles as the foregoing, and hope our paper will contain many such. The above presents very satisfactorily the advantages of high manuring and thorough cultivation for hoed crops. It will be observed that in the experiment of Mr. Comstock, the corn was planted much closer than is generally thought admissible.—Such, we have observed, has been the case in every instance of extraordinary yield of which we ever read. The common impression is, that such close planting will make corn produce "all stalks and no ears," but this cannot be correct, when the treatment of the crop in other respects is right. It was the opinion of Judge Buell that no farmer should rest satisfied with his mode of cultivating corn, until his average crop was 80 bushels of shelled corn to the acre.

Smut, Rust, and Chess.

GROSSE ISLE, WAYNE CO., MICH.
March 3, 1845.

TO THE EDITOR OF THE MICHIGAN FARMER:

SIR:—I lately consulted Professor J. F. W. JOHNSTON, the eminent Agricultural Chemist of England, and author of the well known "*Lectures on the applications of Chemistry and Geology to Agriculture*," &c., on the cause and cure of those sad annoyances and causes of loss to the western farmer—smut, rust, and chess, in wheat. As his answer may probably prove beneficial to others besides myself, I beg to hand you a copy for publication in your paper.

Believe me, very sincerely,
Your very obedient servant,
CHARLES FOX.

—

AGRICULTURAL CHEMISTRY ASSOCIATION,
8 BANK STREET, EDINBURGH.

—About the smut and rust, your notice is all right. Steeping in a solution of salt that will float an egg, and then drying the wet seed with quicklime; fermented urine, blue vitriol, *(sulphate of copper,)* and arsenic, are also used as steeps for the same purpose of killing the fungus, with greater or less effect. The rust arises from the over-luxuriance of the growth of your wheat, which will diminish; but especially from the wetness of your soil, or the rains and mists to which, in the midst of so much water, your land may be subject. A good dose of lime, perhaps *plastering* your wheat, might help this disease; but it will lessen as your land is better drained, and rendered drier. But it is your chess in wheat which has amused me. Not that it is extraordinary that a farmer in Michigan should entertain that opinion, [that it is mutated wheat,] for it is prevalent over many other parts of the United States.—Since I received your letter, I have amused myself further by reading *nineteen* articles upon the subject in the VII, VIII, and IX volumes of the *Cultivator*, your best periodical in the agricultural line, and therefore am not surprised, that, with other farmers you should hold the opinion that chess is a disease of the wheat, or degenerate wheat. The chess is a *Bromus*—a kind of grass, which resembles in its straw the young wheat, but which branches out in the head like the oat. Assume, with all botanists, that species cannot be transmuted, and the production of wheat from a *Bromus* is impossible. If it be impossible, then how are your facts to be explained? You mention two cases. 1st. That of *new land*, when broken up and sown with wheat, chess comes up.—This means, when correctly interpreted, that the

seed of the chess was more abundant in the soil naturally, than the grass you added artificially; and perhaps also that more or less of your wheat was thrown out by the frost and destroyed. 2d. On *old land*, where wheat is sown, if the wheat comes up thick and early, it will keep down the chess perhaps; if it is thrown out, or picked up by birds, or destroyed by frost, the blank spaces will be filled up by the sprouting of those seeds which are most abundant in the soil, which with you seems to be chess, as in the flats of Yorkshire it is the wild mustard. Can you wonder that this seed should abound in the soil, when you remark how large a crop of seed the chess bears, where it is allowed to ripen? And it has ripened, and shed its seed for a thousand years, in your alluvial soils. The clay banks of your rivers are full of it. And though you extirpate it from your land, the first river flood that comes and overflows your land, will bring the mud and seeds of the banks, and sow your land with it again. And thus, in some places, generations may pass before this weed be finally extirpated, even where the greatest care is taken. Such is the case in Yorkshire on the banks of the flat streams. No further off than Northallerton, a good farmer has extirpated with much care and expense, the wild mustard; but a flood comes, undermines a portion of the clay banks between which the river runs; and wherever the river flows over his land, the labors of years has again to be undertaken, before the same seed can be made to disappear. The error with the American farmers is, that they start from the false assumption that the change of wheat is possible, and thus come to see proofs—just as our forefathers saw ghosts—where only natural appearances present themselves.—Believe it to be impossible, and the explanation of appearances may cost a little more thought, but the expenditure of that thought, will lead to the *Truth*. (Signed)

JAMES F. W. JOHNSTON.

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The learned Professor, it will be seen, supposes the chess to be a weed natural to our soil. I have never observed it in this district to grow except among wheat, or among grain crops immemediately succeeding wheat. But being a distinct plant, it must grow wild in some part of our country; and be that where it may, these remarks will there aptly apply. But if the weed be not native here, we must explain the prevalence of this pest in this part of the country, by supposing that it has been brought here o.iginally among grain seed; and may be prevented by scrupulous attention on our part as to the cleanness of our seed. By never sowing seed with chess among it, we can escape the loss we suffer from this weed; but all grain growers must be aware how much cleaning, and what care is requisite to seperate the chess from the wheat. Once introduced into a farm, it may become impossible to eradicate it. C. F.

REMARKS.

The discussion, alluded to above, in the agricultural journals of the country, has, we believe, led to an increased prevalence of the opinion that wheat does not turn to chess, though there are many who still adhere to the opposite doctrine.

We are told that there can be produced (in this county, we think,) a specimen of a head of chess growing on the same stalk with a head of wheat. We have heard of such instances before, but never learned that they stood the test of examination. If this is really so, it will go far to establish the possibility of transmutation, and if the possessor of this specimen will present it to us, we promise to preserve it with the greatest care, that it may be exhibited to the confusion of gainsayers. Fact is abovetheory—and we must make this bend to that, not that to this. But when a thing is asserted as fact which contradicts not only all theory, but the analogy of all the rest of the vegetable kingdom, standing out as a solitary exception to an otherwise universal rule, we have a right to put such asserted fact to the most rigid proof, and are warranted in withholding our assent to it, while supported by any evidence short of absolute demonstration. The man would deserve much credit, who should set this much vexed question at rest. So far as this can be done *by authority*, that of the distinguished name in the foregoing communication may be considered as doing it.

For the Michigan Farmer.

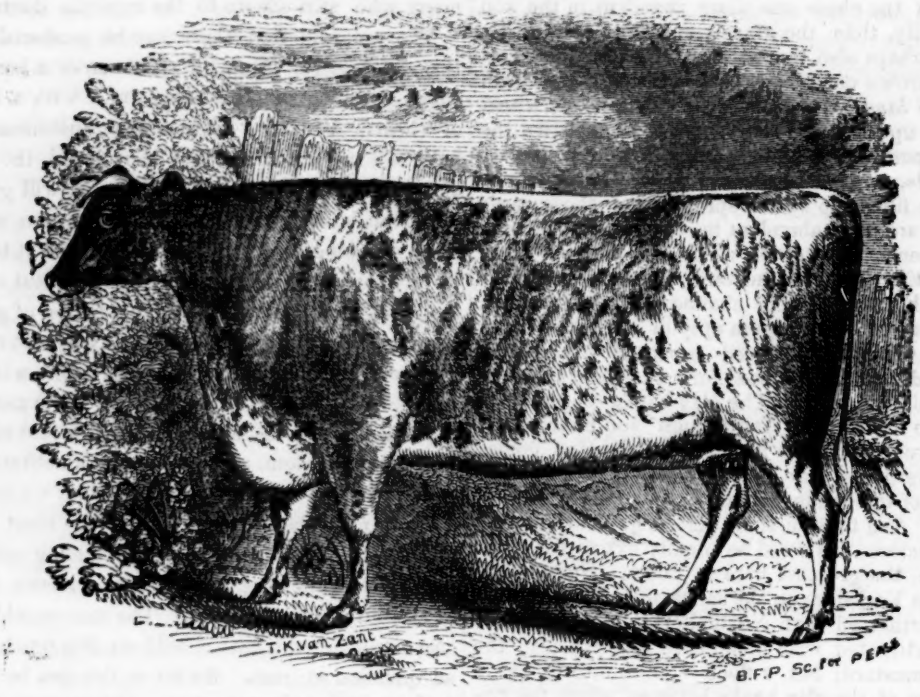
Hints to the Cultivator of Fruits.

NUMBER II.

The Pear tree and Quince are subject to a disease called the *fire blight*. Much has been written and published about its cause or origin; still I think little light has been thrown upon this mysterious disease. Others may think differently,—be it so. My object is, not to discuss this point, but to describe the disease, so that the inexperienced cultivator may apply the only remedy yet known.

The disease commences at the outer extremeties of the limbs, and the leaves appear as if singed by fire—hence its name. Sometimes the extreme points of a large portion of the limbs on the tree will be affected; then again I have seen but a single twig affected. Watch your trees carefully, for many a noble tree has already fallen a sacrifice to this disease in the state, and the disease is rapidly spreading. As soon as you discover an affected limb, amputate at once, cutting it off below the affected part. This, if done in season and thoroughly, will save your tree—put it off a little, till the disease reaches the trunk, and your tree is gone past recovery. The disease spreads quite rapidly, and if you would save your tree don't put it off. After having cut off the diseased branches, carefully gather them together and burn them.

A HORTICULTURIST.



Improved Short Horned Durham Heifer, Esterville.

ESTERVILLE, the property of E. P. Prentice, of Mount Hope, received the first prize for two year old heifers at the cattle show of the N. Y. Ag. Society, at Poughkeepsie, 1844.

We would call the attention of the more wealthy farmers of Michigan, to the advertisement on our last page, of the sale of the whole herd of short horned cattle, of which the above is a specimen, to take place on the 25th June next. They have here, such an opportunity as has never before been offered in our country, to buy cattle of first rate excellence, from which to improve the present breeds. The infusion of a little of this pure blood into our native stock, would be a very important public benefit, and probably no unprofitable investment of capital to the individual conferring it. Of this herd, Mr. Colman, in 1842, gave the following account:

"If any man, however, chooses to see this [short horned Durham] stock in perfection, let him go to the farm of E. P. Prentice of Albany; and if he has any prejudices of any kind against the stock, and is not then prepared to yield every one of them, I can only say he is differently constituted from what I am. Mr. Prentice has about forty animals of the Improved Durham Short Horn, of pure blood and of the highest pedigree. He has one cow with seven heifers of her own progeny along side of her, six of which were in milk. A stock of larger size, of more symmetrical form, of equal beauty, of finer feel, of more thrift, of greater productiveness, I never have seen, nor expect to see; nor do I expect to see a herd better kept, nor better arrangements for their keeping. To an amateur, to an inquisitive farmer, who desires to see what skill, intelligence and care can effect in moulding and improving the animal frame, it is worth a journey from Rochester to Albany on foot to see this stock.

For the Michigan Farmer.

Housing Sheep.

NUMBER I.

MR. HURLBUT:—O. K. in a late number of the Farmer, urges with much propriety the importance of the farmers of Michigan contributing more frequently for their own paper, and as an encouragement gives quite strong assurances that one essay will beget another, and that one man's experience will call out that of another. This, together with invitations from others, induces me to put his belief to the test, and make an attempt to offer a few essays on the subject of housing sheep during the season of foddering, regretting at the same time that the task has not fallen into more able hands. I wish it fully understood that I do not set myself up as sole instructer on so important a subject, for I am yet but a learner in sheep husbandry—or at least in housing sheep.

Until within about six months past, I supposed I knew how to take care of sheep during the winter season, being a native of Dutchess Co. N. Y., which fifteen years since was not far behind any other County in the

United States in the fine wool growing business, either as to quantity or quality. Last fall while on a tour in the New England States, for the purpose of obtaining some of the pure blood Saxony Sheep, I found that an entire change was rapidly taking place in the manner of wintering those valuable animals; and this was so directly opposite to former generally received opinions, that it was not until I had thoroughly investigated the subject in regard to the whys and wherefores, that I could swallow the story at all. Now I do not suppose that all the farmers of Michigan are as ignorant of the system of housing sheep as I was last fall, but since my return I have taken considerable pains to ascertain how this was, and have found nine out of ten not only entirely ignorant, but wholly skeptical on the subject. I should consider myself entirely behind the times to write on this subject, six or eight hundred miles east of this, but there will not be the same impropriety in this western country, considering the prevalent opinions here

I am aware that it seems a little out of season to inform your readers in the spring how to manage sheep during the winter, but on some accounts I have thought proper to commence at the present time, as I find that some in this vicinity are already making arrangements to erect suitable buildings for next winter, having become fully convinced of the utility of keeping sheep completely confined during the whole of the season of feeding, and satisfied that they should not be suffered to get wet either from rain or snow, in order to have them wintered to the best advantage. That sheep will *live* exposed to all kinds of weather, I will not deny; but the *profit* of managing right in the matter of their keeping is as in all other kinds of business, and depends as much upon attention for success.

Having brought the theory it devolved upon me to lead in the practical operation. As soon therefore as the time came that they could not sustain themselves in the pasture, I shut a part of my flock in the underground part of my barn, from which they have not yet been released for a moment, and have found it to work like a charm; my expectations as to the advantages have been more than realized; I only regret that I had not room to shut up my whole flock, for several reasons; among which are a great saving of hay and grain as well as life; also an improvement of quality and quantity of wool, which I expect to prove to the satisfaction of all concerned, if necessary, in some future number. After a few weeks I was not alone in housing sheep; for some of my neighbors, who prophesied evil at first, after keeping a watchful eye for a time, & finding that my sheep could not only live but were doing finely began to enclose theirs also, and are no longer opposers but strong advocates for the system, although on account of theinconveniences of not having water handy it has not been a small job to furnish water; yet I presume none have regretted the task, but on the contrary are ready to do it again if the inconvenience cannot be remedied. But we are now making arrangements to remove this difficulty by either digging wells in our present buildings, or if we build on purpose, to erect them where water can be easily obtained; for it must be remembered that it is as necessary for sheep to have *water* in winter, as for any other stock whatever. I have no choice if they must be deprived of either, whether it be *food* or *drink;* for I scarcely know which would be the worst. They will on an average drink three pints per day each. I have fed those enclosed principally on marsh hay and no grain, while I have fed the remainder freely with grain constantly, and equally as good hay, but fail to keep them in as good condition. I have therefore by experience (though I know somewhat limited,) become a strong advocate for housing sheep. As to the number that can be kept within a certain sized building I have not sufficiently tested, but conclude that 100 can be safely accomodated in a space 24 feet square, and have room for racks and water trough. If we would prevent disease in sheep we must *equalize the temperature* as much as possible. It must neither be too hot nor too cold, but *temperate.* It is necessary if the buildings are very warm, to have a chance for ventilation, which may be afforded very conveniently by having a slide door 3 or 4 feet wide, by which the temperature may be very well equalized, leaving the space for the admission of air larger or smaller as the weather shall vary, having two or three slats or narrow boards nailed across to keep them from jumping out. But perhaps I have written enough without stating a few reasons why any thing should be said to attract the attention of our Michigan farmers to this as it appears to me very important subject; important for the prosperity of this western country. The time was, a few years since, when we could make tolerably good headway at growing wheat, but from various causes we have found of late that it is rather poor policy to depend on wheat alone. And what is there that holds out so much encouragement to the farmer as sheep? If any of your readers know of any other branch of farming more promising, let us have it, for we all desire to adopt the course that pays best. There are some I know who say that the wool business will soon be overdone. Well, every man of course has a perfect right to his own opinion; but that is among the least of my fears, for it appears by the public prints that

we are just beginning to export wool to foreign countries, (that is to any extent) both to England and France; and that we can produce a better article at a less price than either of those countries it seems is fully established.

I would not have our farmers abandon wheat growing, by any means; for all who have any experience in the business know that a certain quantity of sheep can be kept on every farm, and not interfere in the least in raising wheat; so far from this, they are of immense advantage on our summer fallows, in preserving them from becoming foul, or in clearing them of weeds if they are already so, as well as enriching the soil. I know of no other kinds of stock that will pay over half the profit that they will. This is my opinion. If I am wrong I will thank any one to correct me. I was glad to notice in one of your late editorials some remarks on this important subject, as I am confident too little attention has heretofore been paid to the subject of sheep-husbandry in the west; and now I hope we shall hear more from our wool-growers, and would invite them to an interchange of opinion and experience in relation to that most interesting and necessary domestic animal—the sheep.

G. J. Barker.

Manchester, Washtenaw Co., Mich.
March 21st, 1845.

For the Michigan Farmer.

Advancement of Agriculture.

Mr. Editor:—

I flatter myself that I can contribute a mite toward the great object of your valuable paper. I cannot call myself a farmer; but I have had some experience in that business, and have made some observations and made some inquiries of men who can be relied upon. The point which I wish to present to your readers is this: *That the farmers in our State generally, very much need more knowledge of the science of agriculture; and that this knowledge they may easily obtain.*

Our State possesses superior advantages for agricultural pursuits, and a population distinguished for industry, enterprise and general intelligence. *Yet they do not reap one third part of the profits that they might, from their farms,* with perhaps a little more labor and expense, *if that labor and expense were only intelligently applied.* Knowledge is power. And it is surprising to me that while so many improvements in other things are going forward in our country, there should be so little improvement made in that branch which is the staff of life and comfort, and the great leading source of wealth to our country. I draw the above conclusion from the occular demonstration and from the testimony of intelligent and judicious and experienced farmers whom I have consulted on the subject.

The great mass of farmers do not seem even to know that agriculture is a science capable of indefinite improvement. They seem content to plod patiently on in the steps of their forefathers, incumbered with their burdensome yet comparatively fruitless principles of agriculture—carried along by the current of custom and tradition. It reminds me of the following story which I have read:

When white men first came to this continent, they presented the natives with axes, hoes, hatchets, &c., and showed them the use of them, not doubting that the natives would eagerly adopt those improvements. But what was their surprise, when, on returning to the same place two or three years after, they found those natives wearing those valuable implements as ornaments, having given them a high polish; and had returned to the use of the stone axe, a spade made of the shoulder blade of the elk, &c. When inquired of for the reason of this, they answered with great simplicity, "We must follow the customs of our forefathers."

Now I do not mean to intimate that my fellow citizens are as stupid, or as tenacious of old customs, as those Indians; but that the power of tradition is extensively manifested, and that they need light on the subject: and I believe this is all they need, in order to their making most important improvements.

Need our citizens be informed, that the State of New York—some part of it at least—has, within a few years past, witnessed an *agricultural revolution?* There are farmers in that State who have increased the productions of their farms to more than three fold, and that too with little increase of labor and expense—an amount which bears no proportion to the increased profits.

I suppose our sandy and loamy soils are well adapted to turnips, bagas, beets, &c. Incredible quantities of these may be raised on a given space, with deep and repeated ploughings and good manuring. I raised a great crop of the white and yellow baga, and round turnip, on a piece of inferior sandy soil, with one deep ploughing and a little stable manure. They grew very large. Daniel Webster says that the secret of the great prosperity of the English cattle and sheep growers, lies in their attention to the production of those roots. I see not why we may not reap the same advantage from it,

But the knowledge of the cultivation of soil, is only a part of what is needed. There are a thousand and one points besides, on which we need information, and which we may obtain from agricultural writers. Such as directions for a rotation of crops—best kinds of seed—best kinds of stock—cure of diseases of stock—how to save and apply manure—directions for making compost manure—management of fruit trees—grapes—plans of gardens—kinds of garden vegetables—how cultivated—plans for dwelling houses—barns and sheds—chimnies—stoves—saving of fuel, &c.

Now let every person take a good agricultural paper, and all those subjects, and many more, will come up for discussion each in its turn. It seems to me that no farmer ought to think he can dispense with taking one and carefully studying it. I believe he would soon find himself most richly repaid.

I have rather wondered that there were no public lecturers upon agriculture. Such might be eminently useful. It would at least be very like-

ly to awaken a spirit of inquiry and prompt men to avail themselves of means of information.

Yours, PHILANTHROPIST.

Oakland County, March 17, 1845.

Calendar for April.

KITCHEN GARDEN.—Plant Peas and sow Beets, Lettuce and Onion for early. From 10th to 20th, sow Onion, Parsnep, Vegetable Oyster, Asparagus and Spinach. Plant a few Potatoes for early, and prepare the ground for main crop of vegetables, to be sown in May. About the 20th sow for early Cabbage, Cauliflower, Radish, Parsly and Tomato.

FLOWER GARDEN.—Sow the most hardy annual flower seeds such as Coreopsis, Asters, Larkspurs, Poppy, Catchfly, Chrysomthemum, Marigold, Primrose, Mignonette &c. The more tender should not be sown till next month.

PERENNIAL FLOWERING PLANTS may now be transplanted with safety, and if the weather be dry and warm, shade a few days, and give plenty of water.

ORNAMENTAL SHRUBBERY should now be transplanted to decorate the front yard and garden, and add to the pleasure of home.

THE FRUIT YARD—If not already done, should be filled with choice fruit trees, and the trees washed with a weak lye, the last of the month, and pruned. Put old chip manure around the trees, currants and gooseberries, and around the grapes, and tie them to trellises.

GREEN HOUSE PLANTS if infected with insects should be fumigated with tobacco smoke which will effectually destroy them. ***

Barley.

BARLEY delights in any deep loam or other soil not of a tenacious character, in deep gravels and in light sands; but, in order to secure good crops, a tolerable state of fertility is essential. The light sands in which it may be grown, should not be *very* dry. Depth and *friability* of soil, as well as moderate moisture, are necessary pre-requisites to its vigorous growth and the successful fructification of its seed. It succeeds altogether best after hoed crops, as it luxurates in a cleanly culture—prospers most in the absence of weeds, and should therefore never be grown on stubble. Stiff clays or wet soils of any kind, are not adapted to its culture. Deep ploughing and thorough pulverization of the soil, are indispensible to insure good returns; and in order to make assurance doubly sure, after the seed is sown the ground should be rolled; but if it be not convenient to roll at the time of sowing, this operation may be performed after the plants are up, and from two to three inches high. This latter process might be advantageously performed, whether the ground were rolled or not at the time of sowing.

The best time for sowing is as soon in the spring, as, from the absence of frost, the ground can be got ready. The ground should be measurably dry when sown.

As to the *quantity of seed*, if the ground be of good heart, naturally rich, or improved by manuring, six pecks to the acre will be enough. If the ground be poor, two bushels will not be too much. Fresh manure that is undecomposed, or long manure, never should be applied *immediately* to the crop, as it has the tendency to make it run into straw. Lime, marl, ashes, or thoroughly rotted manure may be applied at the time of seeding, the three first being preferable.

The *preparation of the seed* is best effected by being soaked twenty-four hours in a solution of the liquid of horse-dung and salt-petre, made as follows: Put as much horse-dung into a hogshead as will fill it about one third; then fill the hogshead with water. After letting it stand a day, draw it off, and to every eight gallons of the liquid add two pounds of salt-petre. In this soak your seed the time above named. Then drain the matter off, roll your seed in plaster or lime, and sow before it dries; and as fast as your lands are sown, harrow in both lengthwise and crosswise. After the whole may be sown, it should be rolled as above directed. This steep insures an early germination of the seed, imparts a vigorous growth to the young plants, and enables them to overcome weeds.

In England the average is computed at 30 bushels to the acre, though from sixty to eighty, under peculiarly favorable circumstances of soil and seasons, have been grown. In this country, as high as seventy bushels have been raised an acre, and then again as low as ten.

We wish it borne in mind, that barley must be reaped before it is ripe, as otherwise a vast amount is lost by scattering.—*Louisville Weekly Journal.*

MEDITERRANEAN WHEAT.—The very great advantages of this wheat, over any now used by our farmers, is becoming every year more apparent. Besides its superior yield, it is safer from the ravages of the fly and injury from rust, by its more vigorous and rapid growth.

We have received a statement from Mr. Mansfield B. Brown, of the yield of his last year's crop. The average yield from a field of 23 acres, was 35 bushels to the acre. The wheat weighed 64 lbs. to the bushel. From 158 lbs. which he took to the mill, he received 120 lbs. of superfine flour, after paying toll. If our recollection serves us right, the most of it was cut early, and before it was fully ripe. —*Pittsburg American.*

Michigan Subsoil Plough.

BIRMINGHAM, MARCH 26th, 1845.

H. HURLBUT, ESQ.—

DEAR SIR:—I herewith send you the engraved plate of Mr. Aaron Smith's Subsoil Plough.—You will readily understand from the engraving its construction and mode of operation. It is in fact two ploughs, placed one before the other, on the same beam; the hind one being so proportioned and arranged as to raise and lay its furrow slice on that of the forward one. The forward plough runs from 2 to 3 inches deep and lays its slice, consisting of sward, vegetable matter, or surface earth, the surface down, in the bottom of the previous furrow; and the hind one follows from 4 to 5 inches deeper, raising and depositing its slice on that of the other, and in such a manner as effectually to cover the vegetable matter, and make a light and mellow surface.

It has been the endeavor of the inventor in getting up the plough, to make one, the use of which should ensure the practice of deeper ploughing, should diminish the cost of preparing the ground for seeding, and should increase the productiveness of the soil. And in these respects he seems to have been very successful.

He makes two sizes of the plough: the larger takes a furrow 16 inches wide and from 8 to 9 inches in depth; the smaller a furrow 12 inches wide and the same in depth. Both sizes are adjustable, and can be set by the ploughman so as to vary the thickness of either slice or to take a deeper or shallower furrow. Their draft is from a fifth to a sixth lighter than common ploughs taking a furrow of the same size, and to this extent they favor deep ploughing.

The slice of the hind, in being raised and turned, is broken and mellowed, and rendered very light and friable. Once ploughing with the subsoil and soil and dragging, prepares the ground as well, our farmers say, as three times ploughing with the common plough; that is, as by breaking the ground with the common plough in the spring, and then ploughing with it twice and dragging previous to seeding. It diminishes then, to nearly one half, the cost of preparing the ground for seed. It takes more team, it is true—the larger plough requiring two yoke of cattle in sandy and loamy soils, and three in clayey, and the smaller, one yoke in the lighter soils and two in the heavier—but our farmers, generally, being able to exchange work of their cattle with each other, regard this of but little account, compared with the time and labor of twice ploughing their ground.

The plough was used by several of our farmers in the fall of 1843, and by very many of them the last season. They tried *it* and the common plough in the same field for wheat, oat, corn, potato, and other crops. Many of them have assured me, that their wheat and oat crops, where it was used, were from a fourth to a third heavier, than where the common plough was used; and that their corn and potato crops yielded nearly a half more.—They express themselves highly satisfied, as well with the manner of its working as with its effect upon the soil; and would consent to be deprived of almost any implement of farming rather than of it.

It does good ploughing, they say, in several cases where the common plough would not; as, in stoney ground it more effectually resists and turns out with the earth the small stones; in hard ground, it more readily enters and is kept in; and in ground not brought to smoothness by use, it stirs and moves much earth which the common plough would not. They say, in addition, that the ground ploughed with it, continues lighter and more open during the growth of the crop—a result naturally following from the respective positions of the vegetable and mineral earths; that it destroys june grass and the pestilent weeds often so troublesome and injurious to crops—they being smothered at the ploughing by the action of the subsoil earth; that in flat grounds of adhesive soil, where ridging is required, the ridges being rendered light so much deeper, and having a deeper furrow between them, the water does not affect the surface to the injury of the crop, as

where the common plough is used; that the more mellow state of the soil and its freedom from weeds render it much easier cultivated with the hoe; that in summer fallowing, in 8 to 10 weeks after breaking the sward, they find it and the light vegetable matter turned under with it, converted into vegetable mould—a much shorter period than is required to decompose sward broken with the common plough. But since using this plough our farmers are giving up the practice of summer fallowing. A single ploughing with it, they say, disposes of the sward and weeds and mellows the ground as effectually as fallowing, and they are sure that the yield of the crop is better than on fallowed ground. They think the practice of fallowing, therefore, a losing one—a losing one in a threefold sense—in the disuse of the ground during the time of it, in the additional labor required in it, and in a waste of the nourishing element of the soil. The last mentioned loss strikes them no less forcibly than the others. What it is, and in what manner it takes place, there is a very general, and I believe, well grounded impression. I allude to the principle of ammonia—that most fertilizing agent of every soil. In fallowing ground the sward and vegetable matter, being rotted and beaten in pieces on the surface, the ammonia which they contain, being lighter than the atmosphere, escapes and is lost; and this is an effect as unavoidable in the surface decomposition of manures as in that of the vegetable matter of the fields.—To secure this element it is necessary to place the manures and other matters containing it sufficiently beneath the surface of the soil to prevent its escape; and it is necessary to do this before the fermenting and decomposing process takes place, as it is in the earlier stages of that process that the ammonia is set free. The subsoil plow places the manures and vegetable matter at such depth as induces their rapid decomposition, and at the same time prepares the surface in the best manner for the seed. The seed germinates and commences its growth just at the time that the gases by the changing process in the manures are beginning to be set free. The fermentation of the manures gives a healthy warmth to the soil, while the gases, mingling with it, are either taken up at once by the roots of the plants, or combining, form a carbonate of ammonia, which remains in the soil to be dissolved by its moisture and used as by the plants required. To the saving and direct application in this manner of the nourishing properties of the decomposing vegetable matters and manures to the growing plants, to the more open state of the soil, which admits to the roots more freely the warmth, moisture and gases of the atmosphere, and to the freedom of the ground from weeds, which leaves all its nourishment for the support of the crop, our farmers attribute the higher productiveness of the soil where they have used the subsoil plough. It is their opinion that where its use is accompanied with suitable clovering and plasturing, soils will become deeper and richer, even though the same crop be taken from them through a succession of years. The plough is adapted to all soils where the subsoil contains a due proportion of productive ingredients—such are nearly all the lands of the western states and the bottom and river lands of the eastern—but where the subsoil is unproductive and it is desirable to loosen it without bringing it to the surface, a plough is used in this plough in the place of its hind one, of a form suited to work in such manner.

The subsoil plough is manufactured by Mr. A. Smith & Son, at Birmingham and Pontiac, and by Mr. Newel French, at Detroit. The larger size they sell for $15, and the smaller for $12—without a coulter, which is not wanted except in rooty and grubby ground. Mr. French will visit the several counties of the state in the early part of the season, to present the plough to the notice of farmers and furnace men.

Respectfully yours, &c.,

J. R. Grout.

The above is the plow so highly spoken of by a former correspondent who had himself tested its merits. It is doubtless a valuable invention.

Revolving Iron Fanning Mill.

We have just returned from a visit to the shop of Mr. A. Cooley, where we had the satisfaction of witnessing the construction and operation of his newly invented machine for cleaning grain, and take great pleasure in stating that for compactness, simplicity, and beauty, it surpasses any thing we have ever seen constructed for that purpose. Instead of the shaking operation as in the old-fashioned wooden fanning mills, it moves with a steady revolving motion, and from all appearance must be exceedingly durable. We saw it tested with a quantity of wheat made as foul as it well could be, and by running once through, it separated all the foul stuff from the wheat and made it fit for market, and as near as we can judge, it cleans very rapidly. It runs remarkably light, occupies but little room—and we are told the expense will not much if any exceed those built on the old plan.

The whole operating part of the machine is combined within a sheet iron cylinder, three feet long and two feet in diameter; which hangs on an elevation of some fifteen degrees. A sieve and screen of a cylindrical form surround the inner surface of the upper end of the cylinder, and a fan somewhat in the form of a spiral vent water-wheel, occupies the lower portion: and while the fan revolves with great rapidity, the cylinder, screen and sieve move in a contrary direction, with velocity only sufficient to keep the chaff in motion, in order that the wind may take hold of it, and separate it from the grain.

We have not space at this time to give a full description of this machine, but would most earnestly recommend to those who are more immediately interested in the improvement of agricultural implements, to examine the machine and its operation for themselves.

With the limited knowledge we have of such matters we think it an invention well worthy the attention of the farming community.—*Kalamazoo Gazette.*

Ladies' Department.

For the Michigan Farmer.

Cultivation of the Dahlia.

Mr. Hurlbut.—For the last seven years, I have been extensively engaged in cultivating that splenid flowering plant, the Dahlia. A brief description of my mode of cultivation, may be interesting to your readers. I cultivate about one hundred and thirty varieties—from the dwarf of two feet, to the gigantic of seven or eight feet in height. I have succeeded in bringing to perfection about fifty new varieties, many of which are superb.

The Dahlia is a native of Mexico. By its easy culture, it has been extensively grown in Europe, South America, West Indies, and the United States. It is a perennial tuberous rooted plant, and cultivated by planting a tube or piece of tube, attached to which is an eye or bud. For early flowering, let the tube be planted in a pot or box, about one inch below the surface, in an upright position. Water *moderately*, and place the pot in a warm room.—When the bud has begun to grow, and is from one to four inches high, it *should be exposed* to the air and sun at all times, when the mercury is above 33 deg. Fahr. By the middle of May if properly taken care of, it will have attained to the height of from 16 to 24 inches, at which time it may be planted in the garden, by turning it out of the pot with the ball of earth entire, into a hole previously dug for its reception. Those who do not wish to be at the trouble of forwarding the plants in pots, can delay planting the tuber until settled warm weather; say the the tenth of May. Give plenty of water through the season. When the plants have grown from one to two feet, a pole should be driven firmly down in the ground six inches from the stem. As the plant advances in growth, the stem and branches should be tied to the pole with bass or strips of soft cloth, to prevent being broken down by hard winds, as the branches are extremely brittle. Plants, planted in pots from the 1st to the 10th of April, will, in ordinary seasons, begin to bloom about the 10th of June, and continue to bloom until killed by the Autumnal frosts. They grow very luxuriantly in very rich soil, but I think a moderately rich soil the best for producing perfect blossoms. I prefer a good mellow soil, or a compost of one part marsh muck well pulverized, and one part good soil, well mixed. The plants should be pruned, by cutting off one third of the branches and all the lateral shoots, from the ground up, ten or fifteen inches. They may be trained to trellises or in any fanciful shape, by cutting off the top of the main shoot when about a foot high, which will cause lateral shoots to grow, which may be trained to please the taste. When the plants are killed by the frosts, the stem should be cut off about six inches from the ground, dig up the roots and let them dry in a warm shady place until it becomes a *little* spongy, and then place them on a shelf in a *dry* cellar where no frost can affect them. In March or April, they will begin to sprout around the base of the old stem; divide them by splitting down the stem so as to get a bud with one or more tubers, and plant as above. They may be made to flower tolerably well if kept in *large* pots or boxes, by *watering plentifully*, and on the approach of frost in the fall take them into the parlor, and place them again in the open air as the weather permits. If the pots are immersed up to the brim in the ground, they will need less care. Never permit more than one stem to grow from the ground.

S. B. Noble.

Ann Arbor Garden, April 1, 1845.

Domestic Economy.

Test of Pure Tea.—Make your tea as usual, then pour off the first, filling up with water, and instead of replenishing the teapot for a second cup, turn out the leaves on a plate. If they are the real tea, they will retain their usual color, but if they are sloe or ash, or any other such production, the false coloring matter will have been carried off in the water, and the leaves will remain quite black.—*N. Y. Mechanic.*

Buckwheat Cakes, after standing to rise all night, are much improved by adding, just before baking, sour cream and saleratus—say a tea-cup full for two quarts of the batter. This treatment improves the flavor, and makes them richer and lighter. It was discovered this winter by a notable house-keeper in the western part of the State, where fine hot buckwheat cakes and keen appetites, on frosty mornings, often go together.

Corn Cake.—Two tea-cups of buttermilk, one of sour cream previously sweetened with saleratus, one table-spoonful of molasses, and Indian meal to make it nearly as stiff as muffins. Bake half an hour. Thoroughly tried by the above mentioned house-keeper, and found first rate; and also eaten with good *gusto* by the writer.

Apple Jelly.—Slice thirteen large apples very thin without paring them; then cover them with water; boil and strain them,—and to the juice add a pound and a half of loaf sugar, and as much lemon-juice as your taste may direct. Clarify it with eggs, and boil it to a jelly. It is an exceedingly delicate, palatable, and beautiful dish, fit to grace any wedding table, the writer having partaken of it on such an occasion, the house-keeper above named forming the centre of attraction at the time. It is also very fine in sickness.

Domestic Yeast.—The following is copied from the London Gardener's Chronicle, and must be cheap and easy. Boil one pound of good flour, quarter of a pound of brown sugar, and a little salt, [how much is that?] in two gallons of water, for an hour. When milk warm, bottle it and cork it closely, and it will be fit for use in twenty-fours. One pound of this yeast will make eighteen pounds of bread.—*Alb. Cult.*

MICHIGAN FARMER.

JACKSON, APRIL, 1845.

To Correspondents.

The able, (though less practical,) communication of "Agricola," has been deferred for the present. A continuance of his favors in future, of which he assures us, will be more than acceptable.

Lines by "L. H." are beautiful—but scarcely suited to the character of our journal.

"Lochinvar" is received, and will appear in our next. We are glad to have his assurance of future favors.

A long communication from an eastern friend, on an improved method of mnnufacturing maple sugar, reached us too late for insertion in its season. As we know the method to be an excellent one, and in some respects different from any in use, we shall preserve it for insertion another year.

We thank all our correspondents for their favors, and trust we shall continue to hear from them, and other practical and scientific farmers of our state, so that our paper may be what it should be, a record of the agricultural experience of Michigan.

To Postmasters.

Some of the names of new subscribers lately brought in by our agents, having been written in pencil, became partially effaced. Postmasters are requested to inform us, if any of the directions are wrong.

EUROPEAN AGRICULTURE AND RURAL ECONOMY: From personal observation.—By Henry Colman.

This excellent publication promises to be one of the most valuable accessions to Agricultural knowledge of the present day. Its object is, to make known to the American public, the most important recent improvements in European husbandry, those processes by which so vast an amount not only of products but of profit also, is produced from a small extent of surface—to describe the various breeds of stock, new agricultural implements, the condition of farm-laborers, and in short, to give a thorough view of the condition of Agriculture as it is found to exist in those countries of Europe in which it has been carried to the greatest degree of perfection.

Mr. Colman is well known as one of the most able agricultural writers of our country, and is eminently qualified for the useful task which he has undertaken. His work is issued in numbers, each making a large pamphlet, once in two months; and when completed will consist of ten numbers. They are executed in a style of superior neatness, and are sold at fifty cents per number. They will be found at the bookstore of J. I. Herrick, 98 Jefferson Avenue, Detroit, who is agent for the work.

THE Western Reserve Magazine of Agriculture and Horticulture, is the title of a new Agricultural Journal published monthly at Cleaveland, by F. R. Elliott. It is a neat octavo pamphlet of 24 pages, devoted largely to the cultivation of fruit, in which the editor appears to be well versed.—The Western Reserve is capable of sustaining well a publication of this kind, and we wish the new journal and its conductor abundant success. Terms $1 per annum.

A Suggestion.

An agricultural paper is designed mainly to be, *the collected experience of farmers.*

Suppose the farmers of a township were to meet together at stated times, to hold communications with each other, relative to their respective modes of management. Suppose, moreover, that they were all doing their best to improve their methods of culture, and to this end were engaged in trying experiments with a view to ascertain how they might raise their respective crops, to the greatest possible profit and advantage. Is it not apparent that each of those farmers would be likely to be much benefited by the interchange of results with his neighbors?

Suppose that in the course of their experiments, effects apparently contradictory were observed; as for example, one farmer asserts that he has applied lime as a dressing to his fields, with great advantage—while another says that he has done the same without receiving any benefit whatever. One of their number dips a little into agricultural chemistry, and ascertains first why lime is a benefit to *any* land—and discovering that it enters as a constituent part in the composition of the straw or berry of various kinds of grain, he concludes that it is necessary to the production of that grain,—and that where it is deficient in any soil, the supplying of it artificially will essentially benefit that soil; while where there is already sufficient, the application of it does no good. This information being communicated to the whole, they all set about ascertaining by experiment, (or by an analysis of their respective soils,) where lime is deficient, and where abundant, and apply or withhold accordingly. Let them manage thus in regard to other applications and modes of treatment, and will not the system of farming in that town be likely to improve?

Again: Suppose a disease to appear among any one of their crops, or among their domestic animals, and to produce serious damage. All set to work to discover the cause, and devise the most efficient remedy. Their joint efforts will be more likely to be successful, than those of any single individual. At length the investigations of one of their number is crowned with the desired success. He has discovered the cause and the remedy, and straightway communicates his discovery to his neighbors. The ravages of the disease are immediately stayed, and perhaps thousands of dollars are saved to that single community.

Now what such periodical meetings, and such intercommunications among a community of farmers are, an agricultural paper is designed to be, with this difference, that in one case each has the benefit of the combined information of his own neighborhood—in the other, he has that of not his own neighborhood or state merely, but of the whole civilized world.

That our paper may continue to serve as a profitable medium of intercommunication for the farmers of Michigan, we would beg leave to offer

a few suggestions to those who are willing to be at some little pains to contribute to the general good. We would suggest to such, that they devote a certain portion of their farms to the purpose of experiment with such crop as they may prefer. Let them cultivate this portion in the manner that they may judge the very best—keeping a strict account of the labor bestowed, the manner of its application, and of the whole expense of the crop, and finally ascertain exactly the product, and strike the balance of profit or loss. If the result shall exhibit any fact which they may judge of value to others, let them communicate it for publication. This, we conceive, to be the true way for intelligent farmers to improve the condition of their calling.

In such case, each experiment should be made and stated with much exactness, every circumstance being noted which is necessary in order to judge of the advantages of any mode of percedure; there should be no jumping at conclusions hastily from insufficient premises, for we shall thus embarrass rather than assist the progress of agricultural knowledge.

Will you not, fellow-farmers, many of you bear a hand in this good work during the season that is before us. It is assigned as the reason why agriculture has not improved as rapidly as the mechanic arts, that in the latter, experiments can be repeated every fifteen minutes; whereas in the former, there can generally be but one a year. It is the more important then that the one opportunity which the year affords should be well improved.

Potatoe Disease.

Leaving the cause of this calamity to be more fully ascertained by future investigations, we shall give here a few practical results, obtained by some of the experiments of the past season, which may serve as useful hints in those parts of our state in which the disease has begun to show itself.

In the first place we would correct an impression entertained by some that the dryness of most of the soils of this state will operate as a preventive. This opinion is not borne out by experience. On the other hand it is stated that there has been found the greatest prevalence of the rot, in dry sandy soils, especially when richly manured.

The use of stable manure on any land, appears to have had the effect to aggravate the disease.

As a preventive, the planting of unripe potatoes appears to have been attended with very good success. The disease is found to attack the potatoe only in the latter stages of its growth. The Report of the Commissioner of Patents states that no instances of the appearance of the disease have been observed, sooner than about the middle of August. It has been most prevalent in the month of September. It would seem not improbable then, that potatoes are not subject to the disease until they have approached the period of the maturity of their growth, and hence it is recommended to plant potatoes for seed very late in the season, so that when dug in the fall, they shall be but partially grown. As the disease, in the opinion of some, is contagious, it would be safest to keep potatoes intended for seed, if healthy, carefully distinct from any that are infected.

One or two experiments which have been attended with successful results deserve to be stated. In one instance a farmer selected five bushels, partially affected with disease, for planting. He cut two bushels, put them in a barrel, and poured four quarts of plaster over them, shaking them well together. After letting them stand two days, not being yet ready to plant, he emptied them on a barn floor and spread them out. Here they remained five or six days longer, by which time they were so much wilted and dried up that he feared they would not vegetate. He planted them however, at the same time with the other three bushels, which he cut up and dressed with plaster just before planting. They were all planted in one piece, and the result as stated was that the product of the last three bushels was very badly diseased, while that of the first two was perfectly sound.

Another instance is related, where, on planting, a table-spoonful of lime was placed in each hill; and, after they were up, was applied about a gill of a mixture—of lime 2 bushels, plaster 3, and ashes 8. In this case there was not one rotten potatoe in the fall, while the neighboring fields were much diseased.

A small quantity of salt used as a dressing in each hill is said to have had a like effect. Salt is observed to have the power to decompose the product of the disease immediately upon being applied to it—and hence if diseased potatoes were boiled in brine, and the water changed, it is probable it would neutralize all their reputed poisonous qualities.

We would invite the attention of the lovers of flowers, to a communication in this number, from Mr. S. B. Noble, of the Ann Arbor Garden, on the cultivation of the Dahlia. His collection is said to be an excellent one, embracing almost every color and shade, and in many varieties, several colors finely blended. From a collection so numerous, a selection may be made to suit the taste, or please the fancy of all who wish to cultivate so beautiful and majestic a flower.

They may be found for sale by his agents in most of the large towns in the eastern and middle part of the State. J. Owen & Co., G. & J. G. Hill, and N. P. Jacobs, Detroit; Dean & Hovey, Pontiac; Hazelton & Patterson, Flint; I. D. Toll, Jackson; Arnold & Marsh, Battle Creek; Brownson & Goss, Kalamazoo; J. F. King, Adrian.

Selections of Fruit.

As the season has arrived for the transplanting of fruit trees from the nursery to the orchard, we have thought we could not fill a portion of our columns in a manner more acceptable to numbers of our readers, than by giving a list of a few of the choicest varieties of the different kinds of fruit. They are gleaned chiefly from Kenrick's American Orchardist. It is not asserted that the varieties here named are the very best of their kind—tastes differ—but whoever procures any of these kinds, may be sure that he will have fruit of no ordinary excellence.

SUMMER APPLES.

American Summer Pearmain.—The tree bears abundantly. Fruit of medium size, oblong; of a bright red, streaked, the flesh very tender, very juicy, fine flavored, and excellent either for the dessert or for cooking. It ripens the middle of August.

Benoni.—Medium-sized, of a fine red color, flavor sub-acid and good. One of the best apples of the season, ripening the last of July.

Early Sweet-bough.—Size large, form oblong, skin smooth, and of a pale yellow. The flesh is white, tender, juicy, sweet, and excellent. Ripens early in August.

Maiden's Blush.—Fruit very large and beautiful, skin smooth, and yellow in the shade, reddened next the sun. Flesh white, tender and sprightly. Excellent for drying. August to October.

Pumpkin Sweeting.—Fruit large and excellent—too well known to need description. August to October.

Niack Pippin.—Very large and handsome; of a fine yellow color, and excellent flavor, a highly popular and much admired fruit—very productive—ripening in August.

Sapsavine.—A very early summer fruit, of medium size—a pleasant and beautiful fruit, ripening the last of July.

Sapson, or Sapsonvine.—Well known and much esteemed.

AUTUMN APPLES.

Boxford.—A very superior fruit; large, flat, and striped with red on a yellow ground. The flesh is tender, and the flavor excellent. The fruit ripens in September and October, and the tree is a great bearer.

Fall Pippin.—The tree is an abundant bearer, the fruit one of the finest and most beautiful of its season; it is very large, roundish oblong, the skin smooth, of a yellowish color, but brownish red next the sun; the flesh yellowish, crisp, tender, with a very rich, sugary, high flavored juice. It ripens in October, and keeps till winter.

Fall Harvey.—Large and handsome, of a flattened form with broad projecting ribs; skin bright clear yellow, occasionally bright red next the sun; flesh yellow, firm, rich, and high-flavored; a good bearer.

Golden Russet.—The tree is very productive; fruit of medium size; globular; rich, juicy, high-flavored, and excellent. A superior fruit, ripening in November. There are several inferior varieties of this name.

Gravenstein.—This is said to be the best apple in Germany. The tree grows vigorous, and is very productive. Fruit large, round, the eye in a broad, deep, knobby cavity; color clear straw or yellow, with broken stripes of red next the sun; the flesh pale yellow, crisp, with a juice vinous and high-flavored, fragrant and delicious. Not only a first rate dessert fruit, but its abundant juice affords excellent cider. It ripens in autumn, and will keep till into winter.

Orange Pippin.—A beautiful fruit, in size, form and color, much like a middle-sized orange; juice abundant, and of pleasant flavor. The tree bears well. October to January.

Orange Sweeting or Golden Sweet.—The fruit is rather large, flattened at its base and summit; flesh very sweet and excellent; September to December.

Red and Green Sweeting.—Fruit very large, of a yellow color, striped with red; the flesh tender, a very fine fruit, ripening in September.

Red Ingestrie.—A first rate dessert fruit, of medium size; bright golden yellow, but next the sun, bright scarlet; flesh crisp, juicy, rich, high-flavored; October.

Seek-no-further of Autumn.—A fruit well known and excellent.

WINTER FRUIT.

Baldwin.—A large, beautiful and famous fruit; the tree grows vigorous, upright and handsome; fruit round, of a pale color in the shade, fine scarlet or crimson next the sun; flesh white, breaking, juicy, rich, saccharine, with a most agreeable acid, and excellent flavor. The tree bears enormously every other year, and in the interval occasionally a moderate crop. It ripens in November, and may be preserved till February and March.

Esopus Spitzenberg.—Large, very beautiful and excellent. The tree grows upright, and is very productive; the flesh juicy, of a rich, pleasant acid, and high flavor. A celebrated fruit.

Beauty of the West.—A very large, fair and fine flavored sweet apple, yellow mixed with red, juicy and fair; will keep till March.

Bellflower.—A large and beautiful fruit, of an oblong or comical form; of a bright yellow color, with an occasional blush next the sun; the flesh tender, juicy, rich, and finely flavored, alike excellent for the dessert or for cooking; ripens in November, and will keep all winter.

Blue Pearmain.—A large beautiful fruit, of a dark red color, and covered with a dense blue bloom; good for the table, excellent for cooking, and ripens from October to January.

Green Newtown Pippin.—The tree grows very slow; the branches are very slender; the bark very rough; fruit of medium size, of a dull green color, changing to yellow at maturity; flesh pale yellow: juice very saccharine, of an aromatic and very rich flavor with a lively acid. The tree is a great bearer. The fruit retains its flavor and juices till June.

Monmouth Pippin.—Large, handsome, and very superior; of excellent flavor; the tree bears abundantly.

Hubbardston Nonsuch.—The tree grows vigorous, large, branching, and handsome. A prodigious bearer; the fruit is large, globular, or com-

ical; yellow, striped with red. The flesh yellow, juicy, rich, sweet, relieved by a slight acid, and excellent; ripens in December and keeps till February.

Jonathan.—A new winter fruit, which, for its eminent beauty and excellence, is admired above all others, by good judges, in Albany and its vicinity. The fruit is round, two and a half inches in diameter; skin thin, pale red, blended with yellow, deepening into bright red and dark purple, next the sun; flesh very tender, white, occasionally tinged with red; juice very abundant, rich, and highly flavored.

Late Pound Sweet.—Very large; very sweet and delicious; October to January.

Monstrous Pippin.—A fruit of uncommon size—some have weighed over 27 ounces; skin smooth, flesh white, tender, juicy and good, but not high-flavored. From the weight of the fruit the tree is liable to be blown down by high winds.

Rhode Island Greening.—Well known and highly approved. Season November to March.

Roxbury Russeting.—A fine old variety; fruit large and rich; a great and constant bearer—fit for use in winter, and keep till June or July.

Scalloped Gilliflower.—Described by good judges as far excelling the Black Gilliflower.

White Spitzenberg.—A beautiful, fair, and fine flavored fruit. It lasts during winter.

Wine Apple.—The tree grows large and handsome, and bears abundant fruit very large and beautiful; bright red next the sun; flesh rich and excellent; October to February or March.

Yellow Newtown Pippin.—A large flat fruit, of a bright yellow color, with a faint blush next the sun; flesh breaking, juicy, agreeably acid, and fine flavored. It keeps during winter.

Detroit Apple.—Fruit three inches in diameter, skin smooth, of bright scarlet, changing to dark purple in the sun. Flesh white, crisp, very juicy, agreeable flavor and perfume. November to March.

Northern Spy.—Fruit 3½ inches in diameter, very juicy and fine flavored, with a strong and agreeable perfume peculiar to it. A first rate fruit, December to June.

PEARS.

Jargonelle.—One of the most productive of all pears; the best of its season; fruit rather large, very oblong; green, marbled with red next the sun; flesh melting, juicy, with a slightly acid, rich and agreeable taste; ripens last of July.

Pound Pear.—One of the most valuable of winter baking pears; the tree of vigorous growth and very productive; fruit very large, firm, breaking, juicy, astringent. It will keep till April or May.

Early Bergamot.—Ripe in August; flesh yellowish white, rich and sugary.

Julienne.—The tree grows upright and handsome; bears young and most abundantly; fruit of medium size, perfectly melting, rich and juicy. Ripens the last of August.

La Belle de Flanders.—Of the first rank in quality; large, very beautiful, and bears abundantly; flesh sweet, rich, melting and excellent; should be gathered while it adheres yet firmly to the tree; ripens in October, and will keep a month or two.

Cap-sheaf.—A large pear, of a globular form, of an orange russett color—melting, buttery, sweet, and rich flavored. September and October.

Duchesse D'Angouleme.—The finest of the late autumn pears. It is remarkable from others, in its irregular, knobby surface. It has arrived at the weight of 22 ounces.

Von Mons Leon le Clere.—Form oblong, four inches in length, and nearly three in breadth; flesh yellowish white, buttery and melting, with a very rich sugary flavor; a pear of first rate excellence; from October to winter.

QUINCES.

Orange or Apple Quince—is a large, roundish, beautiful fruit, ripening in November. Leaves oval and woolly on the lower side.

Portugal Quince—is of variable form, very juicy and astringent. It is highly esteemed, but is rather a shy bearer.

To these may be added the Winter Quince and the French Musk Quince.

PEACHES.

Free-stones.—Burgess's Beauty.—Large and very beautiful. The tree bears uncommon crops and the fruit is excellent; ripens in New Jersey in August.

Bayne's Favorite.—New, beautiful, extra; flesh yellow, melting, juicy, delicious; ripens very early.

Walter's Early.—Fruit large; flesh red, very juicy and delicious. The tree is very productive, but only on sandy soils; new, early and very superior.

Early Crawford.—Large and very beautiful; flesh yellow, pure sweet relieved by an acid; very rich and excellent; the tree is a great bearer, and of merit unsurpassed. Last of August.

Early Red Rare-ripe.—Fruit large, of a deep red color, which covers most of its surface, flesh stained to the stone with red; melting, juicy, rich, slightly acid, vinous and excellent.

Grosse Mignonne or Morris's Red Rare-ripe.—This fruit obtained the premium of the Mass. Horticultural Society, and is one of the most delicious varieties in cultivation; large, melting, juicy, of rich vinous flavor. Last of August.

Cling-stones.—Early Newington.—A beautiful and excellent fruit, of medium size; ripens last of July.

Catharine.—Fruit large, round; color a beautiful red next the sun,—flesh high flavored,—the stone is small.

La Fayette Clingstone.—A very beautiful fruit, of a fine yellow color in the shade; bright red next the sun; juicy and of excellent flavor. August.

To these may be added Bergen's Yellow, Bullard's Clingstone, and Bullard's Seedling, all ripening in September.

NECTARINES.

Early Violet, Elruge, Lewis's Nectarine, and Golden.

PLUMS.

Blue and Green Gage.—Well known and approved.

Bluker's Yellow Gage.—New, large, round; of qualities first rate; tree very productive.

Cois Golden Drop.—Tree of thrifty growth—

fruit one of the largest, best, and most beautiful known; oblong and rather bell shaped, two to two and a half inches long; flesh gold color, and adhering to the stone; of delicious flavor; ripens early in September.

Columbia.—New and superior; very large; juicy, rich, sugary.

Diamond Plum.—Perhaps the largest known, and very beautiful; its flavor superior, color dark purple.

Italian Damask.—Fruit rather large; flesh yellow, sweet, and high-flavored, and separates easily from the stone. August.

Prince's Imperial Gage.—An eminently valuable fruit; the tree is vigorous, and very productive.

CHERRIES.

Davenport's Early Black.—Very early and excellent; fruit large, at maturity dark shining purple or black; flesh firm, sweet; of a pleasant sub-acid, and fine flavor. Ripens the middle of June.

Black Heart.—Rather large, heart-shaped; dark purple at maturity; flesh dark red, tender, of excellent flavor. Ripe early in July, and a good bearer.

Black Tartarean.—Very large and beautiful, and of most superior quality. The tree is elegant, of rapid growth and great productiveness. Ripens first of July.

White Tartarian.—Rather large, beautiful, pale yellow; flesh half breaking, and of excellent flavor.

GRAPE VINES.

The Isabella and Catawba, both American grapes, are probably as well adapted as any for general culture, they being among the most hardy of the choice varieties.

The above are a few of what are ranked among the best varieties of fruit; but these are so numerous, and of such different kinds of excellence, that it is difficult to determine which to select, or where to stop. We would recommend to those whose means are too limited to enable them to purchase a sufficient supply from the nursery, to obtain at least a few, from which afterwards to take grafts and buds to transfer to their seedlings. But where it can be done, much the better, because the speedier way is to buy at once a full supply, both for their own use, and for the market. And they may rest assured that there is no investment which will ensure a richer return, or better justify their incurring the hazards of debt, than this.

Bees.—Dr. Waterman gives in the Cleaveland Herald, his mode of catching the bee-miller or moth. He says, "I took two white dishes, (I think white attracts their attention in the night,) or deep plates, and placed them on the top of the hives, and filled them about full of sweetened vinegar. The next morning I had about fifty millers caught; the second night I caught fifty more; the third night being cold, I did not get any; the fourth night being very warm, I caught about four hundred."

Agricultural Statistics.

From the Report of the Commissioner of Patents, we gather the following estimates of the different agricultural products of Michigan, during the past year:

Wheat,	4,237,000	bushels.
Barley,	158,000	"
Oats,	4,013,000	"
Rye,	70,000	"
Buck-wheat,	20,000	"
Indian Corn,	4,300,000	"
Potatoes,	5,359,000	"
Hay,	268,000	Tons.
Sugar,	4.611,900	pounds.
Silk,	1730	"

The estimated population of the State, is 308,437. The production of wheat then is at the rate of nearly 13¾ bushels for each individual of the population. This is a larger proportional product than appears in any other State of as large a population as ours, and greater than in any other, except Arkansas. There is however a great falling off from the product of 1843, which was 5,296,000 bushels, or nearly 18¾ bushels to each person.—This falling off is in part made up, by a large increase of the present over the past year in the article of Indian Corn—an increase amounting to about 700,000 bushels.

The extensive depredations of the wheat insect were probably the principal cause of the deficiency of the last year's crop.

Michigan must ever be prominent among her sister states, as a producer of wheat. Her soil and climate are well adapted to its growth, and with a proper system of culture, her capabilities of production may be made to increase instead of diminishing. In urging upon the attention of farmers the expediency of turning more of their attention to other farm products, it has been no part of our wish or expectation, that the amount of this crop should be lessened. But we would have a system adopted by which the same annual product may be raised on half the number of acres, while the other half is devoted to other profitable uses; and this the experience of other countries, as well as of many good farmers of our own State, demonstrates to be entirely possible. By our present methods of cultivation, it is believed the annual product of wheat does not average more than ten bushels per acre.

Clover Seed.

Soak clover seed three or four hours in rain water, or sulphate of amonia which would be much better, and then roll in plaster until no more will adhere, and it will vegetate more thriftily, and be less liable to be injured by drouth.

It is stated that they are successfully manufacturing sugar from potatoes in Great Britain.

Repairing the Character.

While you are moving about and repairing holes in the fence, putting on a rail here, a stake yonder, a rider in another place, you may inquire of yourself whether your *character* is not in some need of repairs? Perhaps you are very careless and extravagant,—the fence needs rails there; perhaps you are lazy—in that case the fence corners may be said to be full of brambles and weeds, and must be cleared out; perhaps you are a violent, passionate man—you need a stake and rider on that spot. And, lastly, perhaps you are not *temperate*—if so, you fence is all going down and will soon have gaps enough to let in all the hogs of indolence, vice, and crime; and they make a large drove and fatten fast. Now is a good time to plan how to get out of debt. Don't be ashamed to *save* in *little things*, nor to earn small gains: "*Many a little makes a mickle.*" But set it down, to begin with, that no saving is made by cheating yourself out of a good newspaper. No man reads a good paper a year, without *saving* by it. Suppose you put in your wheat a little better for something you see written by a good farmer and get five bushels more to the acre.—One acre pays for a year's paper. One receipt, a hint which betters any crop, pays for the paper fourfold. Intelligent boys work better, plan better, earn and save better: and reading a good paper makes them intelligent. Besides, suppose you took our paper a year and found nothing new during all that time, (an incredible supposition!) yet every two weeks we come to *jog your memory* about things which you may forget, but ought not to forget.—*Indiana Farmer and Gardener.*

☞ A good cow ought not to yield less than sixteen quarts a day two months after calving; twelve quarts a day the next four months; six quarts per day the next three months; and three quarts per day the month following.

MARKET INTELLIGENCE.

JACKSON, April 10.

Wheat 70 cts., Corn 37½, Oats 25; Flour (at retail) $4; Beans 75 cts., Potatoes 18¾, Clover Seed (retail) $6 00, Timothy 87½ to $1; Wood, cord 87½ cts.; Hams lb., 7 cts, Pork bbl., $12; Lard 7 to 8 cts., Butter 12½ to 15, Eggs 7, Tallow 9 to 10; Sheep skins lb., 4, Green hides 3 to 3½, Dry do 6, Calf skins green 6.

NEW YORK, April 5.

Flour (retail) $4 50, to 4 75; Corn 48; Oats 30 to 31; Pork bbl., $9 75 to 12 75; Tallow 7; Dry hides lb., 8 cts.

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EXTENSIVE SALE OF IMPROVED SHORT HORNED CATTLE.

HAVING become over stocked, I find myself under the necessity for the first time, of publicly offering my cattle for sale; and that the opportunity to purchase fine animals may be made the more inviting, I propose to put in my Entire Herd—such a herd of Improved Short Horns as has never before, perhaps, been offered by any individual in this country. The sale will embrace about fifty animals, Bulls, Cows and Heifers; all, either imported or the immediate descendants of those which were so, and of perfect pedigree. Those imported were from several of the best stocks in England, selected either by myself or my friends.

It is sometimes the practice at sales of this kind, where the interest involved is considerable, for the proprietor to protect himself by buy bidders, or some other kind of management, or for the owner to stop the sale if offers do not come up to his expectations or the requirements of his interest. Such practices have a tendency to lessen the interest in public sales of this character, especially with those who cannot attend without considerable personal inconvenience. But in this case, assurances are given that no disappointment shall arise to the company from either the causes mentioned, and a good degree of confidence is felt that there will be no dissatisfaction from the character of the cattle themselves.—They shall be submitted to the company, and sold at such prices as they choose to give, without any covert machinery, effort or understanding with any persons; reserving to myself only the privilege of bidding openly on three or four animals, which shall first be designated. The reservation is made that I may not get entirely out of the stock of some particular families which I highly esteem, and that probably could not be replaced.

A full catalogue will be prepared and inserted in the May number of the Cultivator.

The sale will take place at Mount Hope, one mile south of the city of Albany, on Wednesday, the 25th day of June next, at 10 o'clock A. M. E. P. PRENTICE.

Mount Hope, near Albany, March 15, 1845.

☞ Gentlemen from a distance, who wish to obtain stock at the above mentioned sale, and may find it inconvenient to attend in person, are informed that the subscriber will make purchases for those by whom he is authorized. They can state the sum at which bids should be limited, and if convenient, designate the animals they would prefer; or give such general instructions as they may deem proper, under the assurance that they will be strictly adhered to, SANFORD HOWARD,

Cultivator Office. Albany, March 15, 1845.

ANN ARBOR GARDEN AND NURSERY.

AT THE Ann Arbor Garden may be found a very choice collection of

Fruit Trees,
Ornamental Shrubbery,
Hardy Roses,
Perrennial Flowering Plants,
Bulbous Flowering Roots,
Green House Plants,
Monthly Roses,
Splendid Double Dahlias,
Garden Seeds,
Flowcer Seeds.

S. B. NOBLE.

Ann Arbor, April 1, 1845,

Postmasters to whom this number may be sent, are requested to act as agents.

The paper will be continued to old subscribers who have paid up arrearages, on a credit until after harvest.

No paper will be discontinued except at the option of the publisher until all arrearages are paid.

Advertisements.

We shall not encumber our pages with advertisements other than such as will be of general interest to farmers. We are willing to insert on our last page notices of agricultural implements, nurseries of fruit trees &c., and a few of farms for sale.—Terms $2 50 per square for three months.

☞ PRODUCE of all kinds received in payment for subscriptions, for which the highest market price will be paid.

Storey & Cheney, Book and Job Printers, Jackson, Mich.